IN THE UNITED STATES DISTRICT COURT FOR THE
EASTERN DISTRICT OF VIRGINIA

Alexandria Division

UNITED STATES OF AMERICA	)	
	)	Criminal No. 1:24-CR-245
v.	)	
	)	The Honorable Rossie D. Alston, Jr.
PETER MARKUS KUTTKE,	)	
	)	Trial Date: January 21, 2025
Defendant.	)	

UNITED STATES' RULE 16(a)(1)(G) DISCLOSURE

The United States, through Jessica D. Aber, U.S. Attorney for the Eastern District of Virginia, and Alessandra P. Serano, Assistant U.S. Attorney, notices its intent under Federal Rule of Criminal Procedure 16(a)(1)(G) to introduce expert testimony at trial.[1]

INTRODUCTION

The United States will call as a witness at trial Homeland Security Investigations ("HSI") Special Agent Ryan McCollum. He will be asked to explain his respective training and background, the nature of the examination and review conducted in this case, and any methods and/or tools used to assist in the examination. Special Agent McCollum may testify regarding his specialized training and knowledge of the imaging of digital media and may testify regarding the use of virtual machines, peer to peer programs such as BitTorrent as it relates to offenders involved with child sexual abuse material (CSAM).

---

[1] The United States asserts that the report that is the subject to this notice was previously provided to the defendant, as well as the actual files obtained from the defendant's electronic devices, satisfy the requirements of Rule 16(a)(1)(G), in effect December 1, 2022. If, after viewing this notice, the defendant requests further information or has concerns under Rule 16, the United States requests the defendant advise as to what further information is necessary to prepare for trial.

Special Agent McCollum has been employed by Homeland Security Investigations as a Computer Forensic Examiner since 2023. He has conducted upwards of 200 forensic examinations in support of criminal cases. He has received professional training in computer evidence recovery, mobile forensics, and digital evidence. His qualifications and certifications are further set forth in his CV attached hereto as Exhibit 1. Special Agent McCollum has not testified as an expert at trial or by deposition during the previous 4 years. He has not authored any publications in the previous 10 years.

The United States anticipates that Special Agent McCollum will testify regarding the following matters in general terms and/or as applied to this case:

- He reviewed defendant Peter Kuttke's devices seized at the time of the search warrant to include a black Lenovo laptop using forensically sound tools including Sumuri's Recon, Open Text's TX1 Forensic Imager, Access Data's FTK Imager, PassMark's OSForensics, BlackBag's MacQuisition and Blacklight, X-Ways' Forensics, Magnet Forensics' Axiom and Internet Evidence Finder (IEF), GetData's Forensic Explorer, Griffeye's Analyze DI , GrayShift's GrayKey, Cellebrite's Physical Analyzer and Oracle's VirtualBox (for virtualization). Agent McCollum is familiar with each of these programs and how they are used to forensically examine electronic devices. He identified various programs, files, and applications installed on the laptop. He also located child sexual abuse material (CSAM) on the laptop.
- He identified multiple CSAM files located on the devices at the locations listed on page 4 of the forensic report previously produced to counsel.
- He identified an Unbuntu virtualized machine to access, download and store CSAM. This VirtualBox Virtual Machine was stored in a folder titled "Unbuntu" in the laptop's @home\markus folder\VirtualBox VMs\Unbuntu. More details are located on pages 5-6 of the forensic report.
- Agent McCollum will testify that the Unbuntu VM contains three saved states. The 'base' state of the VM when Unbuntu was first installed on 7/24/2023, a Snapshot from 10/13/2023 and a saved state from 11/29/2023. {04ce5e4f-90a0-4d31-9c67-bf1e5d999cd9}.vdi corresponds a 'snapshot' of the VM from 10/13/2023. The 10/13/2023 snapshot contains the same installed programs of {2e5449e9-03c9-4f25-b67c-b129d9a40113}.vdi but does not include the CSAM downloads. The 11/29/2023 snapshot was the saved state of the machine on the date of seizure. This can be seen by exporting a copy of KUTTKE's Unbuntu VM to VirtualBox and observing the saved states.
- Agent McCollum learned that Kuttke utilized a BitTorrent client named 'Transmission' in order to download and receive CSAM.

- Multiple active torrent downloads were present on Kuttke's laptop. Those files are listed on page 13 of the forensic report. Additional folders containing CSAM were located in the downloads folder and are listed on pages 15-16 of the forensic report.
- 237 email files were located to an account with the name "Kuttke" in them. More detail is listed on page 17 for the forensic report.
- Recent files in the Kali Linux ThinkPad were located indicating that suspected CSAM files had been viewed on the computer. The /recently-used.xbel file shows that Kuttke accessed files of suspected CSAM on both the virtual machine, and remotely through the ThinkPad Laptop. Of note, the addresses in the file path that begin with "sftp://192.168.175.52/home/unbuntu/Downloads" denote Kuttke remote connected from his ThinkPad laptop to his Unbuntu Virtual Machine.
- The IP address associated with distributed files that was used to support the federal search warrant was located on the laptop.
- Agent McCollum is expected to testify, as detailed in his report, about commonly used terminology among creators and downloaders of child sexual abuse material, such as "pthc," "pedo," "cp," and others. It is also expected that he will testify about certain known series and victims of child exploitation as they relate to this investigation.
- Agent McCollum is also expected to testify regarding his knowledge of peer-to-peer file-sharing networks, including BitTorrent. He will explain that file sharing networks exist to share any kind of file. He will discuss how people use them to share both legal and illegal files, including child sexual abuse material. Agent McCollum will also explain how the BitTorrent network relies on the internet, which connects the computers that all have a client software. He is expected to explain how users access the BitTorrent network, including the installation of software. Agent McCollum will explain how files, or torrents, are downloaded by a user of the software, including how a user locates a desired torrent file and begins the process of downloading the file. He will explain how the loaded torrent file reaches out to the BitTorrent indices that identify and match the users on the BitTorrent network to others who have also requested the same file and may still have it.
- Agent McCollum will testify that in the usual process between users on the BitTorrent network, a user who loads the .torrent into the client software will attempt to match with other computers running the BitTorrent software who may have various pieces of the .torrent to share with the user for a fast and efficient download if they have that .torrent on their device. The files that are associated with that .torrent file must be the same, and the devices confirm they are the same based on the .torrent file's info hash value. Any data associated with a .torrent file is broken into "pieces," which are then shared by users to other requesting users. A "piece" of the data associated with a .torrent is not the same as a "file" associated with the .torrent. In other words, one "piece" or chunk of data may contain only part of a file or may contain more than one complete file. "Piece," within the context of BitTorrent sharing, means a chunk of the data associated with the .torrent file in order to trade and receive the contents defined by the .torrent quickly and efficiently.
- Agent McCollum is expected to testify about how .torrent files are saved to a computer and used by BitTorrent software applications, including how the computer records the date and time the .torrent file was saved to the computer. He is expected to testify about how the .torrent files on the defendant's computer contain hash values and how those

hash values compare to identified child pornography files. Agent McCollum will testify regarding the default BitTorrent client settings and the settings that the defendant specifically configured on his BitTorrent clients.

In accordance with Fed. R. Crim. P. 16(a)(1)(G)(v), I approve this disclosure:

RYAN T MCCOLLUM
Digitally signed by RYAN T MCCOLLUM
Date: 2024.12.16 18:53:09 -05'00'

_____
Ryan McCollum
Special Agent

As noted, Agent McCollum's report was previously disclosed to defendant. In addition,

the files have been made available to defense counsel upon request.

CONCLUSION

Forensic reports detailing findings, excluding any contraband videos or images, have

previously been provided to defense counsel in discovery. Moreover, the government has made

contraband evidence available for defense review. Such items have been maintained in the

government's custody because they contain child pornography, but the United States will continue

to make them available for review.

In addition, pursuant to Federal Rule of Criminal Procedure 16(b), the government requests

any and all reciprocal discovery, including a written summary of any expert testimony that the

defendant intends to use under Federal Rules of Evidence 702, 703, or 705 describing a defense

expert's opinions, the bases and reasons for those opinions, and the witness's qualifications. At

this time, the United States has not received any reciprocal discovery, including written summaries

of defense expert witnesses' opinions, the bases for those opinions, and their qualifications for this

case.

Dated: December 17, 2024

Respectfully submitted,

Jessica D. Aber
United States Attorney

_____/s/_____
Alessandra Serano
Assistant U.S. Attorney
United States Attorney's Office
2100 Jamieson Avenue
Alexandria, VA 22314
Office:	(703) 299-3768
Fax:	(703) 299-3980
Email:	Alessandra.serano@usdoj.gov

CERTIFICATE OF SERVICE

I hereby certify that, on December 17, 2024, I caused a copy of the foregoing memorandum to be filed with the Clerk of Court using the CM/ECF system, which will automatically generate a Notice of Electronic Filing (NEF) to all counsel of record.

<div align="center">

/s/
_____

</div>

Alessandra P. Serano
Assistant U.S. Attorney
United States Attorney's Office
2100 Jamieson Avenue
Alexandria, VA 22314
Office: (703) 299-3768
Fax: (703) 299-3980
Email: Alessandra.serano@usdoj.gov